

Dartmouth College
Hanover, NH 03755

February 17, 2022

To the editors of *Science Advances*:

We have enclosed our manuscript entitled *Fitness tracking reveals task-specific associations between memory, mental health, and exercise* to be considered for publication as an *Research Article*. The manuscript reports new evidence that, just as different forms of exercise affect *physical* health in different ways, different forms of exercise also affect cognitive performance and mental health differently.

In our study, we collected a year of fitness tracking data from each of 113 participants. We also had the participants fill out surveys asking them to self-report on different aspects of their mental health, and to engage in a battery of memory tasks that assessed their short and long term episodic, semantic, and spatial memory performance. We found that participants with similar exercise habits and fitness profiles tended to also exhibit similar mental health and memory performance profiles. We view the study as laying a foundation for future exercise interventions that target specific aspects of cognitive performance and mental health.

We expect that this article will be of interest to researchers in a broad range of areas, including fitness, memory, and mental health.

Thank you for considering our manuscript, and we hope you will find it suitable for publication in *Science Advances*.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Manning', with a stylized, flowing script.

Jeremy R. Manning